

Execute Tests

Overview

You can either execute your tests manually or automatically. Even if it is an automated test, you can manually set the test status for that execution. You can also create custom statuses.

Tests are always executed within a Test Execution context, even if it's an ad hoc execution. You can execute tests inline (i.e., define the test run status), directly in the Test Execution issue screen, or you can use the Execution Screen which is detailed extensively below.

A Test Execution is validated if all the Tests that verify the specific environment target passed. In order to execute, monitor the progress and report the results, each Test has its own Execution page details. Each Test associated with a Test Execution is called a **Test Run**. A Test Run is like an instance of the Test that contains a copy of the test definition (e.g., description, steps) and the result of that test in the context of that Test Execution .

When a Test definition is modified, the respective Test Runs aren't automatically updated. This happens because the execution of a Test depends directly on its definition. If the Test definition is changed, the executions might not be consistent with the definition anymore. Each time a Test Run is created, the Test definition is copied to it. This guarantees that when the Test definition changes, the Test Runs are not affected and will always contain the original (i.e., when it was added to the Test Execution) Test definition.

You are allowed to execute a Test if:

- you have permission to **"Browse"** the Test Execution issue
- you have permission to **"Resolve"** the Test Execution issue
- the Test Execution issue is not in a status configured to disallow executions

Even though you might not have permission to execute a Test Run and if the execution has already been started, you can see the execution details page in **read-only** mode. An informative message will be shown to at the top of the execution page if the current Test Run is in read-only mode.

Execution Screen

When you execute a Test, the Xray Execution Screen is shown. This screen is accessible from the Test Execution issue view page and the Test issue view page (Test Runs section), and this is where the execution results are displayed and registered. This page contains information about the Test definition and the Test Execution issue context to allow you to execute the Test without exiting this page.

The execution screen is composed by the following sections:


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Execution Status PASS ⬅️ ⬆️ ⬇️ ⬅️ ⬆️ ⬇️

Started On: 28/Aug/14 1:57 PM Finished On: 29/Sep/14 10:21 PM

Assignee: Administrator Versions: v1.0
Executed By: Administrator Revision: r12324
Tests environments: -

Comment [Preview Comment](#) [^](#)
This execution has failed with an error Check the log file.

Execution Defects (0) [Create Defect](#) [Create Sub-Task](#) [Add Defects](#) [^](#)
 No defects yet...

Execution Evidences (0) [Add Evidences](#) [^](#)
 No evidences yet...

[▶ Execution Details](#)

Test Description [^](#)
This tests the square root operation of integers

Test Issue Links (2) [^](#)
created CALC-52 Error calculating the square root of integers ⬆️ OPEN
tests CALC-33 Square root operation ⬆️ OPEN

Test Steps (3) [^](#)

1

Step
I choose the **square root** operation on the calculator

Data

Expected Result
The operation must appear selected

[Comment](#) [+](#)

[Defects](#) [\(0\)](#) [+](#)

[Evidences](#) [\(0\)](#) [+](#)

Step State PASS ⬅️ ⬆️ ⬇️

2

Step
I enter an Integer into the calculator

Data
I = 9

Expected Result

[Comment](#) [+](#)

[Defects](#) [\(0\)](#) [+](#)

[Evidences](#) [\(0\)](#) [+](#)

Step State PASS ⬅️ ⬆️ ⬇️

3

Step
I press the Calculate button

Data

Expected Result
The result 3 should be displayed in the screen, at the right of the "=" sign

[Comment](#) [+](#)

[Defects](#) [\(0\)](#) [+](#)

[Evidences](#) [\(1\)](#) [+](#)

Step State PASS ⬅️ ⬆️ ⬇️

Activity [^](#)

Navigation bar

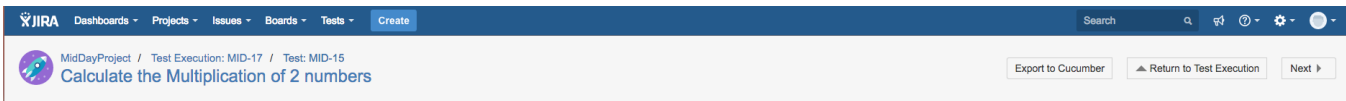
Always available, the navigation bar contains breadcrumbs to allow easy navigation between the Test issue hierarchy. It also contains a toolbar with the Return to Test Execution button that allows you to jump to the current Test Execution issue page, as well as the Next and Previous buttons, to quickly navigate to the execution screen of the other Tests included on the same Test Execution, if applicable.

Export Automated Test Definition

If you are executing an automated Test, you can export its definition right from the execution screen.

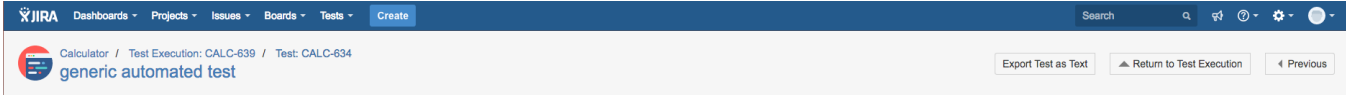
Cucumber

If you're executing a Cucumber Test, an option to export the Test as a feature file will appear.



Generic

If you're executing a Generic Test, then an option to export the Test as text will appear.



Execution Status

The **Execution Status** describes the current Test progress. The possible (native) status for a Test Run are **TODO**, **EXECUTING**, **FAIL**, **ABORTED** and **PASS**. You can also create custom statuses in the Xray [Execute Tests](#) administration page.

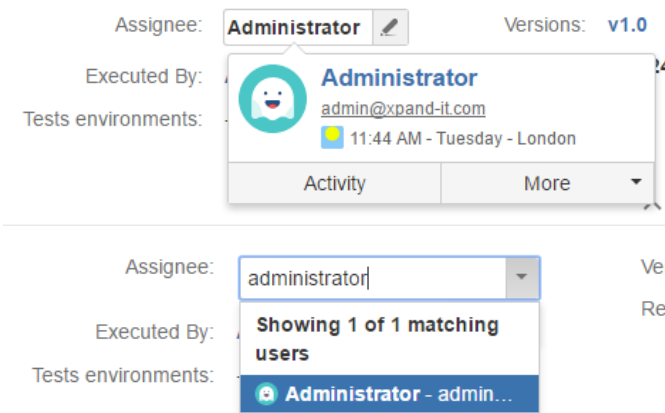
You can change the status of the execution directly through this field. It supports inline editing and once activated, it will display a set of statuses that you can set the Test Run. If the option for setting the Test Run status manually without having to execute all Test Steps (or Examples, as in the case of Cucumber Tests) is enabled in the Xray administration page, then you can set the Test Run Status to any status, independent of the current aggregate status of the Test Steps (or Examples). If this option is disabled, then the status that you can set through this field will be limited to the available transitions based on the current Steps or Examples aggregated statuses.

The status section contains other relevant fields such as:

- **Assignee** - the User assigned to perform the current test execution
- **Executed By** - the last User that changed the status of the current test run
- **Versions** - the target release version tested by the current test execution
- **Revision** - the source code and documentation version used in the current test execution
- **Started On** - the date and time the execution of the current test started
- **Finished On** - the date and time the execution of the current test finished




You can change the Test Run assignee directly on the field. It supports inline editing and once activated, you can filter by user and then select the one you wish to assign to the Test Run.



If the dates are configured to be edited, you can edit the Started On date by clicking in the calendar icon and choosing the date and time. You can check your configurations by going to Jira Administration > Add-ons > Global Preferences.

The Execution Defects field lists the overall defects related with the current execution. It is possible to create a new Defect issue, create a new Sub-task or Add existing Defects by clicking on the respective option.

Execution Defects (0)[Create Defect](#) | [Create Sub-Task](#) | [Add Defects](#) ^



No defects yet...

Execution Evidences

The Execution Evidences field lists the overall attachments related with the current execution and clicking on the **Add Evidences**, opens the **Attach Files** dialog box.

Execution Evidences (0)[Add Evidences](#) ^



No evidences yet...


Comment

The Comment field is inline editable to input overall appreciations about the current execution without reloading the page

The field supports the [Jira markup wiki language](#).

Comment

Preview Comment ^


This execution has failed with an error! Check the log file. 

Click to edit

Test Description

This section includes the current Test issue description. The Test issue description often contains useful information for testers to execute the Test.

The field supports the [Jira markup wiki language](#).





 Execution Details

Test Description

This tests the square root operation of integers


Test Issue Links

This section shows all links associated with the Test.

Test Issue Links (2) ^			
created		CALC-52 Error calculating the square root of integers	 OPEN
tests		CALC-33 Square root operation	 OPEN

Test Issue Attachments

This section shows all attachments associated with the Test.

Test Issue Attachments (1) ^	
 ForTest.json	47 kB Today 5:26 PM

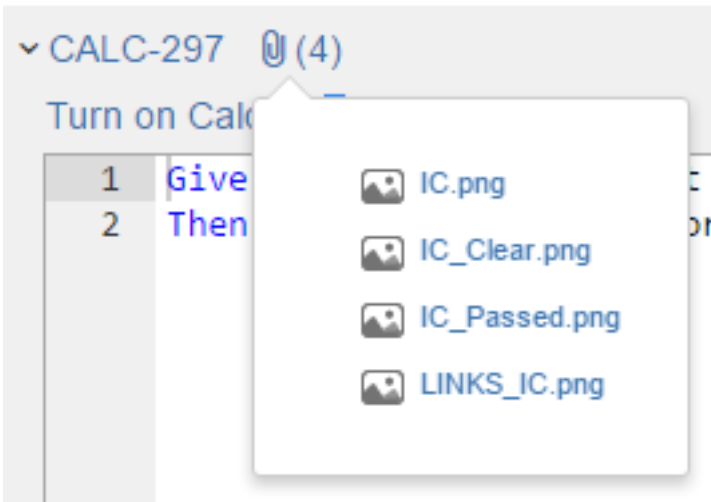
Pre-Condition

The Pre-Condition field shows the Pre-Conditions issues associated with the current Test.



Pre-Condition Attachments

The Pre-Condition field also shows the Pre-Conditions attachment in a inline dialog.



Manual Test Step Results Table

A **Manual Test** execution screen contains the **Test Steps** field, listing the Steps, Data, Expected Result and Attachments to be used as reference while testing.

By clicking on each step, the following fields become editable:

- the **Comment** field which contains any notes about the corresponding step;
- the **Defects** field which contains any defect associated with the corresponding step. It is also possible to input new defects by:
 - Clicking on the Create Defect to create a new Defect
 - Clicking on the Create Sub-Task to create a new Sub-Task
 - Clicking on the Add Defects to add an already existing defect
- the **Evidences** field which contains any attachment associated with the corresponding step. It is also possible to input new attachments by clicking on the + button, which opens the **Attach Files** dialogue box
- the **Status** which contains the current step testing status. This can be changed by clicking on any of the status in front of your Step Status.

Note: Changing the Status on the each Step will affect the **Execution Status** field on the Execution Screen.

Test Steps (3)			
1	Step I choose the square root operation on the calculator	Data (Empty)	Expected Result The operation must appear selected
Comment + Defects (0) + Evidences (0) + <div> Create Defect... Create Sub-Task... Add Defects... </div> Step State PASS			
2	Step I enter an integer into the calculator	Data I = 9	Expected Result (Empty)
Comment + Defects (0) + Evidences (0) + Step State PASS			
3	Step I press the Calculate button	Data (Empty)	Expected Result The result 3 should be displayed in the screen, at the right of the "=" sign
Comment + Defects (0) + Evidences (1) + Step State PASS			

Automated Test Details

An **Automated Test** execution screen contains the **Automated Test Details** field, which list the Steps to be used as reference by the external tool while testing.

Test Details	
Test Type:	Automated[Cucumber]
Scenario Type:	Scenario Outline
Scenario:	<pre> 1 Given I have entered <input_1> into the calculator 2 And I have entered <input_2> into the calculator 3 When I press <button> 4 Then the result should be <output> on the screen 5 6 Examples: 7 input_1 input_2 button output 8 30 20 sub 10 9 5 2 sub 3 10 40 0 sub 0 </pre>

Examples

A scenario **outline** of an automated Cucumber test will normally contain an examples table containing several inputs and outputs for the given scenario.

The examples section details these examples, containing an overall status bar in the header and a table with all the examples below. Each example can have the status: PASS, FAIL or TODO.

A scenario outline test is **PASS** only if all examples passed.

A scenario outline test is **FAIL** if at least one of the examples failed.

A scenario outline test is **TODO** if at least one of the examples did not run and all the other examples passed or todo.

Examples				
<div> <div></div> <div></div> <div></div> </div>				
<input_1>	<input_2>	<button>	<output>	Status
30	20	sub	10	PASS
5	2	sub	3	FAIL
40	0	sub	0	TODO

Results

Xray for Jira supports the import of multiple execution results for the same Test Run. Multiple execution for the same Test Run specify different results for different context/environments. Multiple executions are only supported for Automated Tests. Manual Tests do not have this concept.

When a Test Run contains multiple executions imported from external sources like [Calabash](#) and [Xamarin Test Cloud](#), these executions are presented in a **"Results"** section on the execution page.

This section contains a Table with all executions for the same Test Run. The table has the following columns:

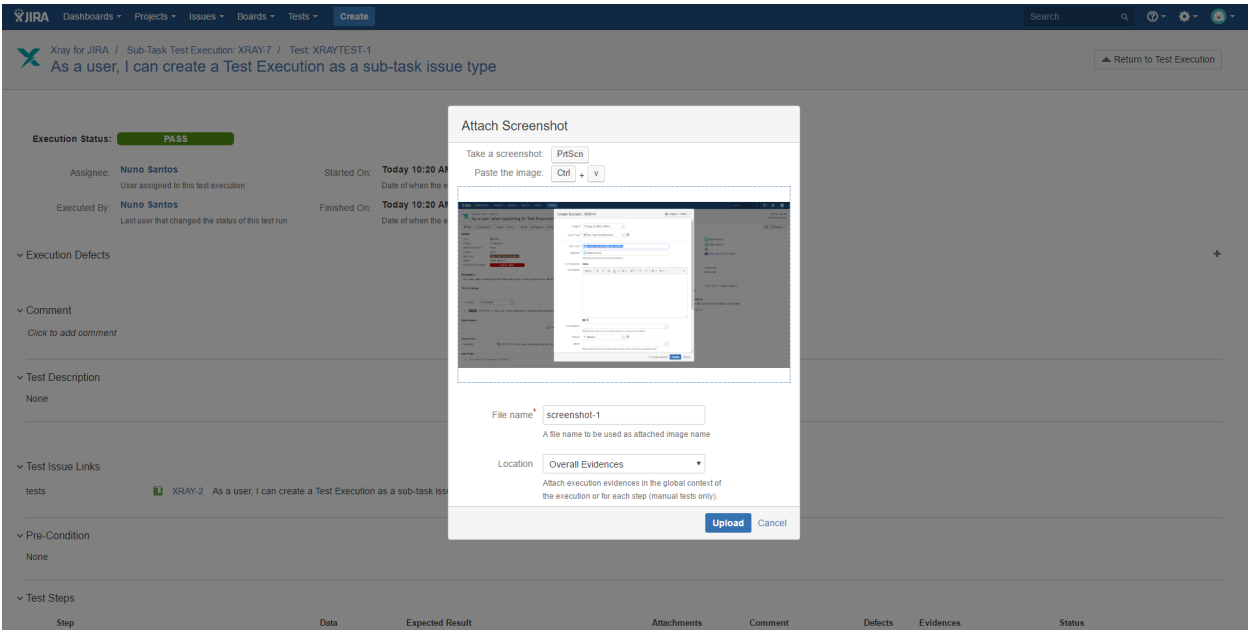
- **Context:** An execution context name (in the case of Xamarin Test Cloud results, the mobile device and operating system version)
- **Error Message:** A possible error message if the result has failed.
- **Duration:** The complete duration of an execution result.
- **Status:** The execution results status.

Results

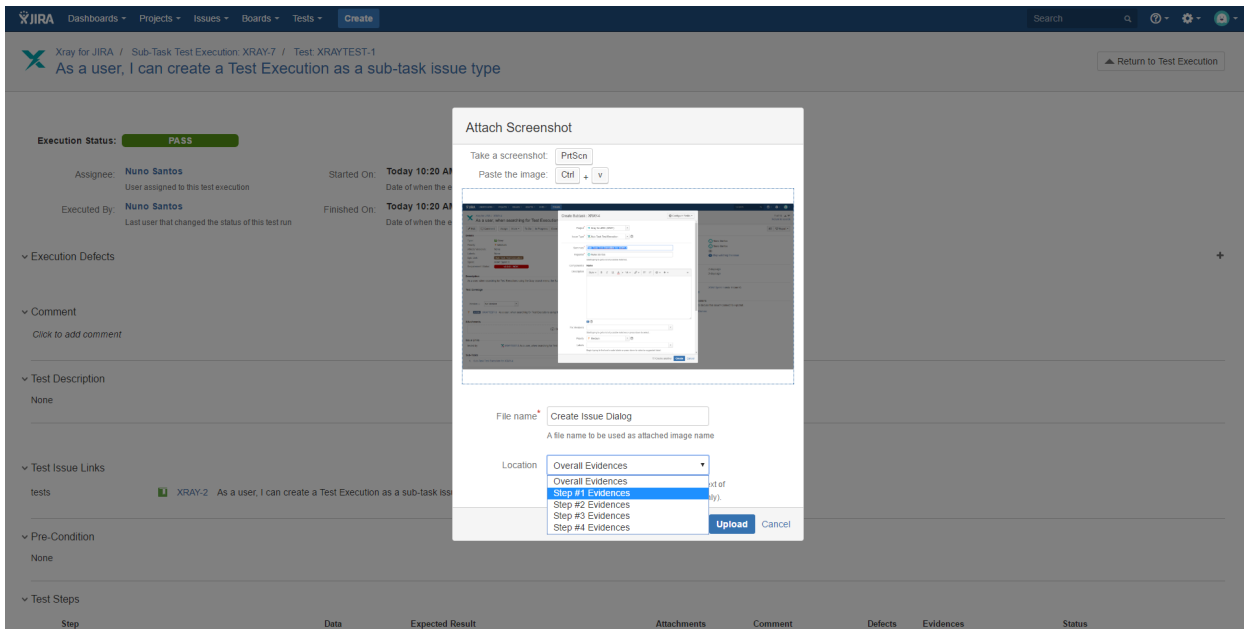
Context	Error Message	Duration	Status	
▼ HTC One (4.3)		16 millisecc	PASS	
<input_1>	<input_2>	<button>	<output>	Status
20	30	add	50	PASS
2	5	add	7	PASS
0	40	add	40	PASS
▶ Samsung Galaxy S III Mini (NFC) (4.1.2)		16 millisecc	PASS	

Attaching Screenshots

To attach a screenshot, paste the image from your clipboard using the relevant keyboard shortcut. (For Mac OSX, use **CMD+V**; for Windows, use **Ctrl+V**.)



Enter a file name for the screenshot you are attaching (defaults to "screenshot-" concatenated with the next number available) and choose where you want to place the evidence (Overall Execution or Test Steps).



Click **Upload** to attach the captured image to your Test Run.

Activity

The Activity field lists all the activities related with the current execution.

Activity



admin changed the comment of this execution.

New Value

While the Test Execution was being performed, a recurring Bug was detected, represented on the Evidence 3.jpg.

Today 10:31 PM



admin added attachments to this execution:

- Evidence 3.jpg

Today 10:24 PM



admin associated defect "DEMO-36-Bug 5 - Trivial" with this execution.

Today 10:23 PM

Updating the definition of the Test after execution started

When a Test definition has changed, a new dialog box will appear on the top of the Execution page informing you that the current execution is obsolete, and will prompt you with Reset or Merge buttons that, when pressed, will load the updated definition as well as delete all the execution data or merge the new Test definition into current state of execution.



Test definition has been modified. You can reset the execution of this test by pressing the "Reset" button. This will load the new test definition and delete the current execution data. If you wish to update the Test definition and maintain the current execution, you can click on the "Merge" button.

Reset

Merge

Reset Execution

You can choose to reset the Execution or keep it for historic record. If you reset the execution, all information previously saved (status, evidences, defects) will be erased.

Merge Execution

You can choose to merge the new Test definition into the current status of execution. This will keep steps that weren't changed along with the associated results/comments/evidences. It will also load new steps (moved, erased or created), pre-conditions or attachments definitions. This will always force a recalculation of Test Run Status. For instance, if the current Test Run Status is FAIL because of a step and this step is removed from Test, if you merge, then the Test Run Status will change to whatever the value combination of the others steps returns.